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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,860	04/12/2004	Federico Cabrele	713-1121	1818

7590 01/26/2007
LOWE HAUPTMAN GILMAN & BERNER, LLP
1700 Diagonal Road, Suite 310
ALEXANDRIA, VA 22314

EXAMINER

MITCHELL, KATHERINE W

ART UNIT	PAPER NUMBER
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3677

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/821,860	Applicant(s) CABRELE, FEDERICO	
	Examiner Katherine W. Mitchell	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6,8-15,17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,8-15,17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4, 6, 8-13, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vernet et al USP 5246323 in view of Fischer et al USP 560-3593.

Re claims 1, 4: Vernet shows a screw anchor (3) with a deformable (expandable -abstract) central portion in which main longitudinal slots (MLS) (4 of the slots labeled "13") are formed, and further comprising secondary longitudinal slots (SLS) (the remaining 4 of the slots labeled "13") formed in said central portion. Examiner notes that 4 of the slots (13) are considered main (MLS) and the balance are considered secondary (SLS). The main longitudinal slots MLS extend essentially parallel to a plane on which a longitudinal axis of the screw anchor lies, and define deformable main longitudinal anchoring tongues (MLAT) which lie on opposite sides of the plane.

Currently the embodiment of Fig 9 is being applied since it is clearer. However, note col 3 line 66 - col 4 line 2, which explicitly states that the slots 13 are in planes which may be inclined with respect to the axis OR which pass through the axis as in Fig 3.

However, Fig 9 shows this most clearly, and note that col 5 lines 12-18 specifies that the only difference in the first and 2nd embodiments is the piercing means of the pin

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body -- the sleeve {anchor} are the same. However, Vernet does not disclose a substantially serrated profile on the main or secondary longitudinal anchoring tongues.

Fischer et al teach an expanding screw anchor 1 having a longitudinal slots 2 forming main longitudinal anchoring tongues (see Fig 1 below). These tongues have a substantially serrated profile, which is described in col 3 lines 13-19 as advantageous:

outer surface of the fixing plug 1. Teeth 5 are formed on the cylindrical outer surface of the fixing plug 1 between the notches 4. The teeth dig into soft material as the fixing plug 15 is expanded, and in hard building materials they produce corresponding frictional force at the wall of the drilled hole as a result of undergoing plastic deformation.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Vernet and Fischer et al before him at the time the invention was made, to modify Vernet as taught by Fischer et al to include tongues with a serrated profile, in order to obtain enhanced gripping and resistance to anchor pull-out as taught by Fischer et al. One would have been motivated to make such a combination because a more secure anchoring would have been obtained.

Explanation of marked up drawing: Pairs of main longitudinal slots (MLS) define main longitudinal anchoring tongues (MLAT) (strip between two "13's". There are 8 equally-spaced slots "13" (see detail of Fig 1 below) - examiner has labeled an octagon below, with each corner representing a slot, with which slots are considered main MLS and which are considered secondary SLS.

Vernot:

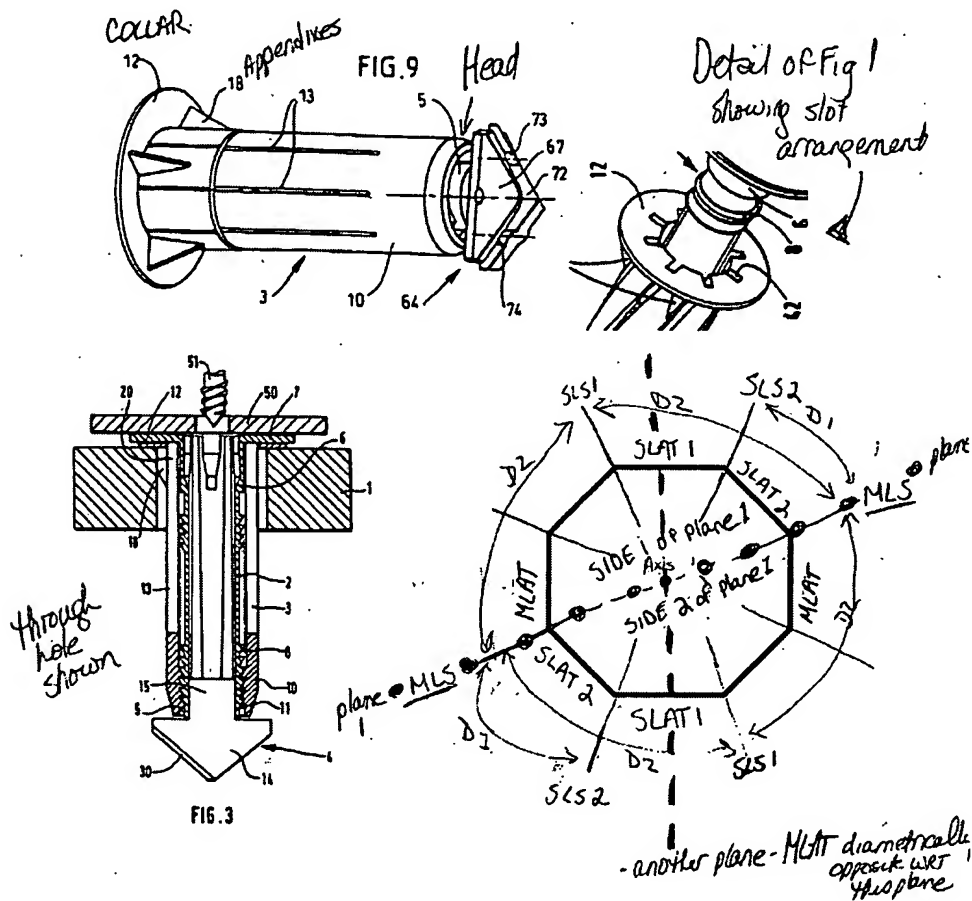
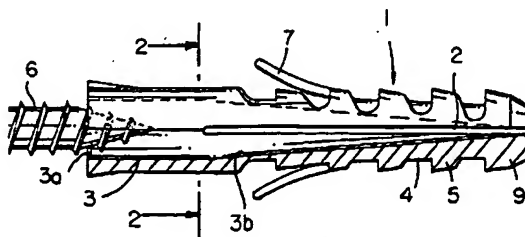


FIG. 1



Fischer:

Re claim 2: The sections between a main and secondary slot or two secondary slots can be considered a deformable secondary longitudinal anchoring tongue (SLAT).
(Col 4 lines 21-48)

Re claims 6: Fig 9 and col 3 lines 66-69 teach evenly angularly spaced slots.

Re claim 8: Referring to the numbering by examiner of the octagonal shape, representing the collar with 8 slots of Vernet, there are 4 SLS arranged in 2 pairs that are arranged in mirror image relationship with each other, and the SLS of each pair are parallel.

Re claim 9: As best understood, any SLS would have to be located between each pair of MLS - the anchor is circular and between refers to either direction.

Re claims 10-12: a head with a collar at a first end, said collar with annular flange (12) coaxial with longitudinal axis as shown in Fig 9 above. Projecting appendices (18) are shown as equally spaced and integral with collar and parallel to longitudinal axis. There is a head (10) at opposite end.

Re claim 13: There is a hole (Fig 20 coaxial with longitudinal axis having a number of internal ribs parallel to said axis (see Fig 2 and 4 at opening of bore in collar).

Re claim 17: Vernet shows a screw anchor comprising MLSs defining MLTs wherein each tongue is located on an opposite side of a screw anchor axis plane, and SLSs defining SLATs wherein pairs are configured so the anchoring tongues of each pair are located on opposite sides of the plane.

However, Vernet does not disclose a substantially serrated profile on the main or secondary longitudinal anchoring tongues.

Fischer et al teach an expanding screw anchor 1 having a longitudinal slots 2 forming main longitudinal anchoring tongues (see Fig 1 below). These tongues have a substantially serrated profile, which is described in col 3 lines 13-19 as advantageous:

outer surface of the fixing plug 1. Teeth 5 are formed on the cylindrical outer surface of the fixing plug 1 between the notches 4. The teeth dig into soft material as the fixing plug 15 is expanded, and in hard building materials they produce corresponding frictional force at the wall of the drilled hole as a result of undergoing plastic deformation.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Vernet and Fischer et al before him at the time the invention was made, to modify Vernet as taught by Fischer et al to include tongues with a serrated profile, in order to obtain enhanced gripping and resistance to anchor pull-out as taught by Fischer et al. One would have been motivated to make such a combination because a more secure anchoring would have been obtained.

3. Claims 14-15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vernet et al USP 5246323 in view of Fischer et al USP 560-3593 and Wieland USP 6158934.

Re claim 14: Deformable main longitudinal anchoring tongues (MLAT) are arranged diametrically opposite one another with respect to the longitudinal axis of the anchor, and secondary longitudinal anchoring tongues (SLAT) are arranged in essentially mirror image pairs in which each pair is arranged diametrically opposite the longitudinal axis. (see marked up drawing above). However, Vernet does not disclose

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a substantially serrated profile on the main or secondary longitudinal anchoring tongues or main and secondary longitudinal slits of different lengths.

Fischer et al teach an expanding screw anchor 1 having a longitudinal slots 2 forming main longitudinal anchoring tongues (see Fig 1 below). These tongues have a substantially serrated profile, which is described in col 3 lines 13-19 as advantageous:

outer surface of the fixing plug 1. Teeth 5 are formed on the cylindrical outer surface of the fixing plug 1 between the notches 4. The teeth dig into soft material as the fixing plug is expanded, and in hard building materials they produce corresponding frictional force at the wall of the drilled hole as a result of undergoing plastic deformation. 15

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Vernet and Fischer et al before him at the time the invention was made, to modify Vernet as taught by Fischer et al to include tongues with a serrated profile, in order to obtain enhanced gripping and resistance to anchor pull-out as taught by Fischer et al. One would have been motivated to make such a combination because a more secure anchoring would have been obtained.

However, Vernet does not disclose a substantially serrated profile on the main or secondary longitudinal anchoring tongues.

Fischer et al teach an expanding screw anchor 1 having a longitudinal slots 2 forming main longitudinal anchoring tongues (see Fig 1 below). These tongues have a substantially serrated profile, which is described in col 3 lines 13-19 as advantageous:

outer surface of the fixing plug 1. Teeth 5 are formed on the cylindrical outer surface of the fixing plug 1 between the notches 4. The teeth dig into soft material as the fixing plug is expanded, and in hard building materials they produce corresponding frictional force at the wall of the drilled hole as a result of undergoing plastic deformation. 15

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Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Vernet and Fischer et al before him at the time the invention was made, to modify Vernet as taught by Fischer et al to include tongues with a serrated profile, in order to obtain enhanced gripping and resistance to anchor pull-out as taught by Fischer et al. One would have been motivated to make such a combination because a more secure anchoring would have been obtained.

Wieland teaches longitudinal slits on an expanding anchor (7,8) which can be considered main and secondary slits. These are used to ensure better anchoring, especially in unfavorable, loose or lightweight materials, per col 1 lines 23-65.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Vernet in view of Fischer et al and Wieland before him at the time the invention was made, to modify Vernet and Fischer et al to include slits of differing axial lengths forming tongues of different length as taught by Wieland. One would have been motivated to make such a combination because a more secure anchoring in loose, crumbling, or irregular materials would have been obtained.

Re claim 15: MLATs are separated by MLS which extend essentially parallel to a plane on which the screw anchor axis lies, and wherein the MLAT lie on opposite sides of the plane.

Re claim 18: As discussed above with respect to claim 1, Vernet and Fischer et al teach all the elements except shorter secondary slits. Wieland teaches longitudinal slits on an expanding anchor (7,8) which can be considered main and secondary slits. These are used to ensure better anchoring, especially in unfavorable, loose or

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lightweight materials, per col 1 lines 23-65. Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Vernet in view of Fischer et al and Wieland before him at the time the invention was made, to modify Vernet and Fischer et al to include slits of differing axial lengths forming tongues of different length as taught by Wieland. One would have been motivated to make such a combination because a more secure anchoring in loose, crumbling, or irregular materials would have been obtained.

Response to Arguments

4. Applicant's arguments filed 12/12/2006 have been fully considered but they are not persuasive. Examiner fully agrees with applicant that Vernet et al operates as applicant has shown in Fig 4 in his response appendix. Examiner agrees that the originally straight sleeve does bulge out and engage the rear face 19 of wall 1.

However, examiner disagrees that serrations as disclosed by Fischer et al are totally unnecessary. While the bulge would indeed be the primary gripping structure, serrations on the sleeve would serve to cause the bulged area to better "bite into" and grip the face of the wall, and thus enhance the gripping and resist movement. While they are not necessary - obviously, Vernet et al. works as disclosed, they would serve as an obvious improvement in enhancing the gripping, in examiner's opinion.

5. Regarding Wieland and the fact that the slits can be considered main and secondary slits, examiner is not arbitrarily defining a required structure or function, only a label, as Wieland calls all the slits simply slits rather than "main" and "secondary" slits. However, the functionality of slits of different lengths is taught as beneficial. Not only

would different length slits allow the anchor to bulge out at different axial locations, thus accommodating different thicknesses of wall panels, but a single panel might have a need for an anchor that grips at multiple axial locations, due to an irregular hole, as described in Wieland in col 1. The fact that Wieland is not required for Vernet to work does not teach away from the combination -- Wieland is a teaching of an enhancement and the motivation for it. This would be an obvious advantageous modification to the anchor of Verner, in examiner's opinion.

6. Examiner notes that limitations including claims 2 OR 15, each including the limitation that the MLS have a length that extends axially farther than both ends of the SLS would likely be allowable, as this implies the functionality that the combination cited cannot perform. However, applicant is advised to carefully review the claims to ensure that it is always clear whether it is each respective slot or tongue of a pair, or the entire pair, that is being referenced.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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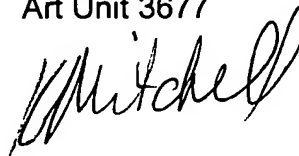
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 571-272-7069. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Katherine W Mitchell
Primary Examiner
Art Unit 3677



1/23/2007